

# How to deploy MIIC web archive

This guide covers how to configure and run the MIIC web archive (war).

In short, you need to:

- Install Java, Tomcat, and PostgreSQL,
- Customize some Java properties files inside the MIIC war
- Deploy the war and start the tomcat webserver

## Get the Web Archive

Please email [Aron Bartle](#) for the latest web archive. If you have access to the miic1 server, you can find it at `/var/lib/tomcat/webapps/miic/miic.war`.

## Install Required Runtime Software

- Java JDK 1.7.0\_11 or later. [get Java](#)
- Apache Tomcat 7.0.35 or later. [get Tomcat](#)
- PostgreSQL 9.2 or later. [get PostgreSQL](#)

## Tomcat Configuration

Don't enable PUT commands. REST interface will use POST instead.

~~MIIC should work from any Tomcat 7 server. MIIC handles its own authentication so the default Tomcat settings are probably OK.~~

~~To enable PUT commands, add the following init param to your web.xml (in tomcats' config folder, e.g. /etc/tomcat):~~

```
<servlet> ... <init-param> <param-name>readonly</param-name>
<param-value>>false</param-value> </init-param> ... </servlet>
```

To enable writing Netcdf-4 files, add this to your tomcat.conf (usually `/usr/share/tomcat/conf/tomcat.conf`):

```
JAVA_OPTS="-Djna.library.path=/usr/local/netcdf4/lib"
```

conf/tomcat.conf:JAVA\_OPTS="-Djna.library.path=/usr/local/netcdf4/lib"

## MIIC Configuration

You'll need to customize some configuration files before MIIC will run in a new environment.

### Create miic database

- Using the pgAdminIII tool or command line create a database named "miic"

### Extract configuration files from the archive

Extract MIIC config files from the archive and copy them to your tomcat server configuration folder (e.g. /etc/tomcat). Config files located here will take precedence over files in the web archive.

- `% jar -xvf miic.war <file>`
- `cp <file> <Tomcat config folder>`

Extract the following files:

1. WEB-INF/classes/miic.properties
2. WEB-INF/classes/miic.jdbc.properties
3. WEB-INF/classes/urs.properties
4. WEB-INF/classes/logback.xml

## Edit miic.properties

At minimum, the following settings must be verified:

- **opendapServer**: the root URL of the desired opendap server or servers.
- **maxOPeNDAPFetch**: the number of cores on the OPeNDAP server
- **OPeNDAPCacheFolder**: disk location for OPeNDAP cache
- **ICDataCacheFolder**: disk location for ICPlan data
- **spaceTrackUid / spaceTrackPassword**: Credentials for [www.space-track.org](http://www.space-track.org) (please don't re-use mine)

## Edit miic.jdbc.properties

Edit the following properties:

1. **jdbc.url** to your PostgreSQL database
2. **jdbc.username** / **jdbc.password** to the PostgreSQL user who owns the miic database

(Optional) To show SQL queries during debugging:

- Set property `hibernate.show_sql` to true.

## Edit urs.properties

Set **urs.preestablished.redirect.url** to what will be the MIIC login URL.

- For developer testing, you can use localhost: **`http://localhost:8080/miic/ursLogin`**
- If using a front-end proxy, this should be the proxy address: **`https://miic-proxy/miic/ursLogin`**

## (Optional) Edit log settings in logback.xml

Tailor the amount of debug output:

- To reduce MIIC debug output, set log level for miic (`log4j.logger.gov.nasa.miic`) to "INFO"
- To add hibernate debugging, set log level for hibernate (`log4j.logger.org.hibernate`) to "DEBUG"

Logging level can be further tailored by a specific Java class or package.

## Deploy and test

1. Copy `miic.war` to your tomcat deploy folder. This is normally the "webapps" folder.
2. Start tomcat. This is typically: **`/etc/init.d/tomcat start`**
3. Point your browser to the MIIC url, which is typically: **`localhost:8080/miic`**

If all is working you should be able to login via URS and authorize the MIIC application...

...but you won't get very far (yet).

We don't want just anybody to be able to use the app, so an admin must grant a role to the new user:

1. Start `pgadmin` from console or `pgAdminIII`
2. In table `user_accounts`, change the role from **ROLE\_PROVISIONAL** to **ROLE\_USER** or **ROLE\_ADMIN**.

## Related articles

- [How to setup & run a MIIC OPeNDAP Server](#)
- [How to deploy MIIC web archive](#)
- [How to build the MIIC OPeNDAP plugin](#)